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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------|------------------|
| 10/535,740   | 05/18/2005  | Markus Heckel        | 4855/PCT                | 9436             |
| 21553  | 7590        | 02/09/2006           | EXAMINER<br>AMRANY, ADI |                  |
| FASSE PATENT ATTORNEYS, P.A.<br>P.O. BOX 726<br>HAMPDEN, ME 04444-0726 |             |                      | ART UNIT<br>2836        | PAPER NUMBER     |

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                      |  |
|------------------------------|--------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/535,740 | <b>Applicant(s)</b><br>HECKEL ET AL. |  |
|                              | <b>Examiner</b><br>Adi Amrany        | <b>Art Unit</b><br>2836              |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 May 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2 and 6-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 6-8 is/are rejected.
- 7) ☒ Claim(s) 1, 2 and 6-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/18/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: Figure 1, item 15, terminal, disclosed on page 4, line 7. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

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- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Applicant is also reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

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- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Please consider removing paragraphs 2.1 and 2.2 from the abstract.

3. The disclosure is objected to because of the following informalities:

a. Page 2, lines 7 and 13, the application switches between describing the use of an ignition-autonomous capacitor and a function-autonomous capacitor.

Both elements are disclosed as the same device (figures 1 and 2, item Cz).

b. Page 2, line 13, it appears applicant intended to insert "disadvantage."

Appropriate correction is required.

### ***Claim Objections***

4. Claims 1-2 and 6-8 are objected to because of the following informalities: Claim 1 defines the function-autonomous capacitor as element Cs (lines 12 and 18). It appears applicant intended to insert Cz.

Claims 2 and 6-8 are objected to because they depend on method claim 1.

5. Claim 2 is objected to as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites the limitation in claim 1 that for checking the system-autonomous capacitor (Cs) *it* is discharged into the function-autonomous capacitor (Cz). The term "*it*" in line 2

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renders the claim indefinite because there is no reference within claim 2 as to what "it" refers to.

For the purposes of the art rejection of claim 2, "it" will be treated as discharging current, as cited in claim 1, line 20.

6. Claim 8 is objected to because there is no antecedent basis for the limitation of an ignition-autonomous capacitor (Cz). Parent claim 1 recited a function-autonomous capacitor (Cz). The use of multiple elements designated as the same device was objected to in the specification, as discussed above.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

7. Claim 6 is rejected under 35 U.S.C. 112, because the word "means" is preceded by the words "the charging connection is established by" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967). It appears that applicant may have intended to insert "the charging connection is comprised of."

#### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-2 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (figure 2) in view of Belau (US 6,448,784).

With respect to claim 1, the method for operating an electronic module would have been obvious over the apparatus disclosed the prior art, in view of the circuit apparatus for controlling an occupant protection device disclosed in Belau.

The prior art (figure 2) discloses the elements that are to be combined to form applicant's method. The prior art discloses an operating voltage source (Ubat) for supplying the module with electrical energy, a circuit unit (3) for carrying out a function, a system-autonomous capacitor (item Cs) for supplying energy to the circuit unit in the event of an operating voltage interruption, a function-autonomous capacitor (item Cz) for supplying reserve energy, and a a voltage converter (item 1) for charging the system autonomous capacitor (Cs).

The prior art does not expressly disclose that the function-autonomous capacitor is connected to the voltage converter and to the system-autonomous capacitor by means of a charging connection (figure 1, item 5), and that the charging connection is controllable in the following operating states:

as a switch for clocking the charging current charging the function-autonomous capacitor, and

as a controllable resistance for producing a constant discharging current for checking the system-autonomous capacitor and for producing a re-loading current for re-loading the function-autonomous capacitor.

Belau discloses a charging connection (figure 1, items 2-4, and column 3, lines 44-49) to measure and control the energy storage of a capacitor (figure 1, item 2). The evaluator (figure 1, item 4) can control the on/off operation of the power stage (figure 1, item 3) to detect the charging current being supplied to the capacitor (column 4, lines 1-44). By testing the voltage drop across the firing element, the evaluator is able to determine current flow and the state of the capacitor. The evaluator can also control the discharging current flowing from the capacitor (column 3, line 56 to column 4, line 1). The evaluator can check and control the charging and discharging of the capacitor without triggering the element provided in series with the power stage (column 5, lines 11-22). Belau further discloses that the evaluator is a processor (figure 1, item 4, and column 5, lines 41-46).

While the Belau charging connection does not specifically charge the function-autonomous capacitor, it would be obvious to a person skilled in the art that the current discharged by the system-autonomous capacitor can be used to trigger an electrical element or routed to an energy storage device, such as the function-autonomous capacitor.

Applicant's prior art and Belau are analogous art because they are from the same field of endeavor, namely control circuits for vehicle safety devices.



At the time of the invention by applicant, it would have been obvious to combine the elements of applicant's prior art with the circuit apparatus disclosed in Belau to create the method of operating an electronic module.

The motivation for doing so would have been add circuit elements capable of detecting the charging current charging the storage capacitor, testing the operability of the circuit, and preventing the circuit from firing prematurely.

With respect to claim 2, Belau further discloses that checking the system-autonomous capacitor, the discharging current ("it") is discharged into the function-autonomous capacitor (column 4, lines 26-32). Belau discloses using the evaluator to test the current ( $I_{\text{charge}}$ ) delivered by the energy source. Testing the current being routed around the capacitor as disclosed in Belau is analogous to testing the current being discharged by the system-autonomous capacitor in the prior art. The Belau capacitor absorbs current until it is fully charged. The full current value is then sensed by the evaluator at the firing element. In the prior art shown in figure 2, the system-autonomous capacitor absorbs current until it is fully charged. No current value is sensed by the processor at C unless the energy source fails and the system-autonomous capacitors discharges.

With respect to claim 6, Belau further discloses the charging connection comprises a transistor (figure 1, item 2) and a resistive element (figure 1, item 3) connected in series.

With respect to claim 7, the prior art discloses that the voltage converter (1) is an up-converter (page 1, line 25).

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With respect to claim 8, the prior art discloses the use of the method according to claim 1 in a motor vehicle control device with a power module (3) as a circuit unit for triggering a security device (4) (page 1, lines 29-31), wherein in the event of an operating voltage interruption the system function is the provision of the ignition energy by means of an ignition-autonomous capacitor (Cz) (page 2, lines 6-10).

### ***Conclusion***

10. Prior art made of record, but not relied upon is considered pertinent to applicant's disclosure: Fendt (US 5,608,260), which discloses a method for activating a vehicle passenger security system in the event of a fault to the system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adi Amrany whose telephone number is (571) 272-0415. The examiner can normally be reached on weekdays, from 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571) 272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**PHUONG T. VU**  
**PRIMARY EXAMINER**